9 - Initial Attack

Policy

All fire management activities will be based on firefighter and public safety, cost effectiveness, and values to be protected consistent with resource objectives, by using the full range of strategic and tactical options as described in an approved, NEPA compliant Fire Management Plan (FMP).

In areas where an approved FMP exists, naturally ignited fires may be managed to benefit resource values in accordance with the preplanned conditions and objectives outlined in the plan.

All initial attack incident commanders will have completed basic training in wildland fire cause determination, such as "Wildland Fire Cause Determination for First Responders" (P-130).

Local units will establish standard response times for all initial attack resources.

An operational briefing will be provided to all incoming fire personnel. Incoming incident commanders must place a priority on providings briefings to resources already on the scene.

Objectives

Over 90% of wildland fires are contained/controlled during initial attack. It has been documented that the greatest risk to the health and safety of firefighters is during the initial and extended attack phase of fire suppression. Therefore, the objective of initial attack fire suppression is to provide safe operations that are consistent with an approved FMP.

Initial and extended attack incident commanders must be evaluated by managers to ensure that suppression operations safely and efficiently meet current policy and FMP objectives.

Initial Attack Dispatch

Standard Operating Procedures

Field offices with dispatching responsibility, in conjunction with their cooperators, will ensure dispatch standard operating procedures (SOPs) are developed. **Agency Administrators will ensure that an annual review verifies that required elements are updated and in place, and that written, approved procedures are fully implemented and adhered to during dispatching operations.** (See *Preparedness Review Guide* for specific information on review procedures.)

There are variations in the required elements for dispatch SOPs due to many factors (i.e. activity level/complexities, interagency coordination, all-risk incidents, hazmat). However, the following **topics** shall be identified (at a minimum) in a dispatch center's SOP. The elements identified under the topics are examples of what should be covered. Additional guidance can be obtained by reviewing local unit fire management reference guides.

- **Organization:** chain-of-command/table of organization for local agencies and cooperators; notification process/procedures; roles/responsibilities, etc.

- **Dispatch Operations:**
  General Information
  Dispatcher Role and Responsibilities
  Dispatcher Training and Qualifications
  Procedures for Dispatch of Resources Off Unit

- **Daily Duties:**
  Check-In/Out of Administrative/Fire Personnel
  Intelligence
  Weather/Briefings
  Verify Initial Attack Response Levels
  Status Suppression Resources
  Preparedness Level Establishment and Verification

- **Initial Attack Response Plan** (synonymous terminology—preplanned dispatch plans, run-cards, dispatch procedures): general information relating to the plan; procedures for identifying preparedness levels; notification to suppression forces and management of new fire starts or ongoing fire activity; modification/update procedures for the plan; procedures to follow when activity exceeds the initial attack plan, etc.

- **Emergency Operations (Fire/Non-fire):**
  Notification of a Fire Report
  Land Status Verification
  IA Response Plan Activation

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Agency and Area Notification
Move-up and Cover Procedures
Call-back Procedures
Evacuation of Fire Area
Closing Public/Private Roads
Ordering Additional Personnel, Equipment, Aircraft
Fire Weather Watch and Red Flag Warning Notification
Temporary Flight Restrictions (TFR)
Agency Duty Officers (Roles and Responsibilities)
Aircraft Pre-Accident Plan
Agency Employee Accident Plan
Utility Company Notification (Power and Gas)
Law Enforcement Dispatching Procedures/Requirements
Hazmat/Spill Response Notification Procedures
Local Government Requesting All-risk Assistance
Search and Rescue

- **Local Agreements:** copies of all interagency or inter-district agreements governing the use of suppression resources, including maps delineating areas of responsibility for fire suppression coverage.

- **Communications:** procedures for assigning/managing local radio frequencies; procedures for obtaining additional frequencies; a map of repeater sites/frequencies; instructions for using local dispatch radio consoles, phones, computers, fax machines, paging systems, etc.

- **Weather:** processing of weather observations via WIIMS; daily posting and briefing procedures; broadcasts of fire weather forecasts to local fire suppression personnel; procedures for processing spot weather forecast requests and disseminating spot forecasts to the field; procedures for immediate notification to fire suppression personnel of Fire Weather Watches and Red Flag Warnings.

- **Fire Danger:** remain aware of locally significant fire danger indices and record those values daily; update and post monthly the seasonal trends of those values vs average.

- **Information to be Provided by Dispatch for Suppression/Support Personnel:** resource availability/shortages; radio frequencies to be used; burning conditions/fuel types; weather forecast updates; local fire activity; agency policies (limited/full suppression), etc. **For Management:** fire activity; incident updates; weather updates; resource status.

Time frames and frequencies/locations for daily briefings must be clearly specified in the local dispatch SOP. A method should also be identified for documenting briefings (time given, content of briefing, and person(s) conducting and receiving briefing).

- **Preparedness Levels:** general information relating to the local preparedness plan; procedures for identifying level; notification to management; dispatching roles and responsibilities at each preparedness level, etc.

  Specific triggers should be incorporated into preparedness plans that cause the preparedness level to move up or down. These triggers could be related to number/size of fires, amount and type of resources available/committed, regional/national fire situation, condition of local fuels, observed fire behavior, and human-caused risk or predicted lightning activity level, etc. Specific actions should also be tied to each preparedness level, such as prepositioning of suppression resources (crews, engines, airtankers, smokejumpers, etc.), the activation of local MAC Groups, making contacts with other agencies, and hiring of CWN aircraft, emergency rental equipment (EERA), or AD crews.

- **Aviation:** ordering/scheduling requirements and procedures; special use airspace; special use mission requirements; incident/accident reporting and documentation procedures; flight management/tracking procedures.

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- **Dispatch Center Staffing Plan:** call-out procedures for additional personnel in emergency situations; designation of duty officer for dispatch center; shift limitations and day off/R&R policy; EFF hiring, etc.

- **Expanded Dispatch Plan:** indicators for considering establishment of expanded dispatch; recommended organization and points of contact; overhead positions to order; location/facilities; equipment/supplies; support needs; procurement or buying unit team considerations; service and supply plan, etc.

- **Administrative Items:** funding, travel, time sheets, fire reports, etc.

- **Accident/Incident:** criteria/definitions; agency notification and documentation requirements; procedures for mobilization of critical incident stress debriefing teams, etc.

- **Medical Plan:** activation/evacuation information; medical facility locations and phone numbers; air and ground transport (Medivac) capability; burn center information, etc.

- **Media Plan:** general procedures; notification requirements to agency external affairs personnel; routing for media calls.

Fire Sizeup

At the earliest opportunity after arrival on an incident, the initial attack incident commander should give, at a minimum, the following information to the agency dispatch, and continue to keep the dispatcher informed of any significant changes and progress on the fire:

- Fire name

- Location

- Terrain (slope, aspect, elevation)

- Position of fire on the slope

- Size of fire

- Fuel type

- Anticipated control problems

- Spread potential

- Values threatened

- Weather conditions

- Wind speed and direction

- Fire behavior

- Resources on the fire

- Resources needed, if any

- Estimated containment

- Estimated control

- Cause (known, suspected, under investigation)

Fire Cause Determination Checklist

1) Take essential investigation materials to incident.

2) Make factual notes of all your actions and findings:
   ▸ Time fire was reported.
   ▸ Name and ID of reporting party.
   ▸ En route observations – people and vehicles.
   ▸ Name and ID of persons or vehicles in vicinity of fire origin.
   ▸ Weather observations.

3) Locate and protect the fire point of origin. (Use a GPS to record lat./long. or UTM, depending on local policy.)

4) Search fire origin area for physical evidence of fire cause.

5) Protect evidence. **Do not remove** unless necessary to prevent destruction.

6) Make sketches of origin area using accurate measurements in relation to locations of all evidence.

7) Take photographs from all angles (include long and medium distance, as well as closeup views) of fire origin area and important evidence. Document in photo evidence log.

8) Turn over all notes, information, and physical evidence to the responsible law enforcement representative, or make your notes part of the official fire record.

For additional information on Fire Cause Determination procedures, see Chapter 14, Reviews and Investigations.

Operational Briefings

Procedures and Guidelines

Wildland fire personnel are not always familiar with local fuel and weather conditions, terrain, potential hazards, etc. Fire personnel not provided with information regarding the incident may be less effective, and safety may be compromised. Therefore, **it is BLM policy to brief all fire personnel who arrive at an incident, at the earliest possible time.**

Many crews arrive at a local unit/dispatch center by vehicle or by transport aircraft, and are then transported to the incident. Transporting crews to the incident provides an excellent opportunity for briefing prior to fireline deployment. Exceptions include aerially delivered firefighters, and occasionally engine crews and miscellaneous overhead, who may respond directly to the incident.

If aerially delivered firefighters cannot be briefed prior to departure from base, the receiving dispatch office should provide a briefing to the supervisor by radio. In all cases, aerially delivered firefighters will be briefed prior to starting work. Engine crews can also be briefed by radio, if driving to the ordering unit/dispatch center for the briefing would cause needless delay. Documentation of operational briefings should be noted in an appropriate log.

The following Operational Briefing Checklist and Guidelines contain the **minimum** items required to brief all incoming crews, personnel, or resources. Units are encouraged to expand the minimum briefing, as appropriate, to ensure that safety and efficiency are addressed.

Operational Briefing Checklist		
1. Incident Status	Location	
Size	Jurisdiction	
Hazards		
2. Incident Site	Forest/Grassland/etc.	
General Health		
Terrain		
3. Fuel Conditions	Live Fuels	
1-hour	10-hour	1000-hour
Important Indices		
4. Weather Conditions	Current: air temp wind speed direction rh	Forecasted: air temp wind speed direction rh
5.Command/Control	Incident Commander	
Resources on Incident		

Resources Ordered		
Communications		
Reporting Procedures		
Key Radio Frequencies COMMAND:	TACTICAL:	AIR TO GROUND:
6. Fire Behavior	Current	Forecasted
7. Aviation	Aircraft	
Hazards		
Restrictions		
8. Other		

Operational Briefing Checklist Guidelines

Note: some items on the briefing checklist may not be applicable. For example, a discussion on 1,000-hour time-lag fuels may not be necessary if such fuels do not exist on or adjacent to the incident site.

1. **Incident Status** – Provide the location (Township, Range, Section, lat./long.), estimated size, jurisdiction, and known hazards such as power lines, hazmat sites, poor driving conditions, etc.

2. **Incident Site** – Provide basic information about the site, including biome (forest, woodland, shrub steppe, etc.). Include general state of health, such as overmature, 70 percent insect infested, large areas of blowdown, flashy fuels, etc. Also, provide general sense of terrain, such as large relief with 60 percent slopes.

3. **Fuel Conditions** – Provide best estimates of live, 1-, 10- and 1,000-hour time-lag fuel moisture contents, and important NFDRS indices as they relate to fire behavior and appropriate suppression actions.

4. **Weather conditions** – Provide current observations (including wind speed and direction, air temperature, and relative humidity) and predicted or Spot Weather Forecasts. **Emphasize Fire Weather Watches and Red Flag**

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Warnings.(The IC should work in conjunction with dispatch to obtain and relay site weather conditions.)

5. **Command and Control** – Provide the name and radio frequency of the incident commander (or appropriate general staff) for contact on arrival. Also describe the appropriate method of reporting (checking in), the general communications procedure, and key radio frequencies.

6. **Fire behavior** – Provide best estimates of rate of forward spread, direction of spread, and approximate flame lengths. Include important facts on recent fire behavior.

7. **Aviation** – Provide important information relating to number and types of aircraft operating in the area, including agreements, restrictions, or airspace closures.

8. **Other** – Add additional information that would improve efficiency without compromising safety.

Spot Weather Forecast

Spot weather forecasts should be requested for fires that have potential for extreme fire behavior or exceeding initial attack, or are located in areas where Red Flag Warnings have been issued. See Spot Weather form in Appendix.

The basic elements of a spot weather forecast are:

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- Name fire or other project

- Control agency

- Request time and date

- Location by ¼ section

- Drainage name

- Exposure

- Size

- Elevation (top and bottom)

- Fuel type

- Fire character (ground, crown)

- Weather conditions:
    ‣ place
    ‣ elevation
    ‣ observation time
    ‣ wind direction
    ‣ wind velocity (eye level or 20 feet)
    ‣ dry bulb
    ‣ wet bulb
    ‣ remarks

Strategy & Tactics

Determining appropriate initial attack strategies and tactics must be based on the main incident and management objective–providing for firefighter and public safety. There are other factors, including fire behavior (rate of spread, fuel type(s), flame length, etc.), which along with values at risk and resources available, often dictate which strategies and tactics should be used.

Always match strategy and tactics with present and predicted fire behavior and weather conditions!

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Fire Suppression Interpretations from Flame Length	
Flame Length	**Interpretations**
Less than 4 feet	Fires can generally be attacked at the head or flanks by firefighters using hand tools. Handline should hold fire.
4 to 8 feet	Fires are too intense for direct attack on the head with hand tools. Handline cannot be relied on to hold the fire. Bulldozers, engines, and retardant drops can be effective.

8 to 11 feet	Fires may present serious control problems: torching, crowning, and spotting. Control efforts at the head will probably be ineffective.
over 11 feet	Crowning, spotting, and major fire runs are probable. Control efforts at the head of the fire are ineffective.

Direct Attack   This strategy is conducted directly on the flaming edge of the fire. Direct attack must start with an anchor point.

Direct Attack	
Advantages	**Disadvantages**
There is minimal area burned. No additional area is intentionally burned.	Firefighters can be hampered by heat, smoke, and flames.
Safest place to work. Firefighters can usually escape into the burn area.	Control lines can be very long and irregular, because the line follows edge of fire.
Full advantage is taken of burn out areas.	Firefighters may accidentally spread burning material across line.

May reduce the possibility of the fire moving into the crowns of trees or brush.	Doesn't take advantage of natural or existing barriers.
Eliminates the uncertain elements of burning out or backfiring.	Usually more mopup and patrol.

Indirect Attack   This strategy is used when a direct attack is not possible or practical. The use of natural barriers, roads, fuel type changes, etc. helps to establish control lines as part of burn out or backfiring operations. Effective strategy when fire behavior is intense and/or fire fighting resources are scarce. Indirect attack must start with an anchor point.

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Indirect Attack	
Advantages	**Disadvantages**
Can locate line along favorable topography.	More acreage will be burned.
Takes advantage of natural or existing barriers.	May be dangerous to firefighters, because they are some distance from the fire and can't observe it.
Firefighters work out of smoke and heat.	Fire may cross line before it is fired.
More time to construct line.	Burning out may leave unburned islands.

Allows line to be constructed in lighter fuels.	Brings into play the dangers of burning out or backfiring.
May be less danger of slopovers.	Fails to take advantage of line that has already burned out.

Parallel (Flanking) Attack This strategy constructs fireline 6 to 50 feet from the fire's edge. The line is burned out immediately after construction. Parallel attack must start with an anchor point.

Parallel (Flanking) Attack

Advantages	Disadvantages
Firefighters can drop back from the fire's edge, getting away from the smoke and heat.	Fire may cross fireline before it is burned out.
Can cut fireline across pockets and fingers.	Burned area is not readily available as a safety zone.
May be able to place line in lighter fuels.	Fails to take advantage of fireline that has burned out on its own.
Usually shorter and straighter line.	Will increase the area burned.

Hotspotting   Hotspotting is the stopping of the spread of the flaming front. The purpose of this dangerous strategy (no anchor point and working at the head of the fire) is to slow the rapid spread of the fire, until firelines can be constructed. Often used in the protection of life and property in conjunction with support from air tactical resources (retardant, water drops).

Cold Trailing   Cold trailing means the firefighters are working along a partially dead line. They are inspecting the black line for heat, constructing line where needed, and mopping up hotspots. Cold trailing is used to reduce unnecessary disturbance to the environment.

Mopup   To extinguish burning material that may cause a fire to spread beyond the control lines.

Mopping Up a Fire	
Priorities	**Guidelines**
Start work on each portion of line as soon as possible.	Start with the most dangerous line first. Work from the fireline toward the center of the fire. Small fires are totally extinguished. On larger fires, mop up a minimum of 100 feet, or to such a distance that nothing will blow, roll, or spot across the line.
Secure and extinguish burning materials.	Arrange burning fuels so they cannot roll across the line. Spread smoldering fuels and apply water so they will cool. Scatter fuels away from the line.
Deal with special hazards **inside** the line.	Fall snags; extinguish logs and stumps. If you can't fall the snag, clear around the base, so that burning material will not fall into flammable fuels.
Deal with special hazards **outside** the line.	Move slash back, away from the fireline. Fall snags and cover with dirt. If stumps are close to the line, cover them with dirt.

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Reinforce the fireline.	Widen and clean the fireline. Reinforce any undercut line. Burn out or cold trail islands. Dig out roots that cross under the fireline. Feel for hot material along the fireline.
Check for spot fires.	Constantly check for spot fires, especially downwind from the fireline. Check heavier fuels (logs, snags, slash, etc.) for smoldering material.

For additional information on strategic and tactical guidelines and principles, see the NWCG *Fireline Handbook* (PMS 410-1, NFES 0065), Chapter 1, Initial Attack and Chapter 5, Safety, and the *Incident Response Pocket Guide* (PMS-461, NFES 1077).

Evaluation of Initial/Extended Attack ICs

Evaluation Standards

The following criterion emphasize factors that are critical for ensuring safe and efficient wildland fire suppression, and are examples for managers to use in the evaluation of initial and extended attack incident commanders.

1) **Provide for the Safety and Welfare of Assigned Personnel**

Recognize potential hazardous situations and determine if the fire can be fought safely.

Select safe and effective strategies and tactics by applying the LCES process.

Give operational briefings to firefighters on incident status (objectives, strategies, tactics), fuels, indices, and fire behavior, weather, resources, communications, hazards, etc. (see Briefing Checklist).Ensure that special precautions are taken when hazards exist.

Establish effective communications and lookouts.

Ensure that adequate rest, food, water, and health services are provided to all personnel.

2) Fire Size-up

Correctly estimate the fire behavior and potential.

Order appropriate resources to safely and effectively manage the fire.

Communicate effectively with dispatch.

3) Fire Suppression Operations

Select safe and efficient strategies and tactics that meet management objectives, without compromising adhere to the 10 Standard Fire Orders, 18 Watch Out Situations, and principles of LCES.

Monitor weather and fire behavior, communicate changes and/or updates, and make needed adjustments to strategy and tactics.

Communicate effectively with dispatch and supervisor. Keep dispatch informed of progress, problems, and needs. Make timely and effective notification if fire escapes contain/control lines or has exceeded or is expected to exceed initial attack capabilities.

Provide timely and effective input into the Wildland Fire Situation Analysis (WFSA).

Determine contain and control times, when the fire is out, and demobilization plans.

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4) Administrative Responsibilities

Complete forms for time, accidents, incident status or intelligence summaries, unit logs, evaluations, and other required or pertinent reports.

Brief and submit complete documentation to supervisor.

Actively participate in an analysis of:

- incident objectives

- strategies and tactics

- safety

- cost effectiveness/efficiency

- lessons learned and suggestions for improvement